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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/710,825

08/05/2004

David R. Hall

66.0069

4824

38046

7590

08/30/2006

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EXAMINER

WONG, ALBERT KANG

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/710,825	Applicant(s) HALL ET AL.	
	Examiner Albert K. Wong	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-18, 20 and 21 is/are rejected.
- 7) ☒ Claim(s) 14 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) ✓ | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) ✓
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. This Office action is in response to the application filed August 5, 2004. Claims 1-21 are pending.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 17-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 17, the term cooperatively arranged is indefinite.

Regarding claim 18, both claims 17 and 18 recite "a shield". It is not clear if there is one shield or two shields.

Regarding claim 20, the electronic circuitry lacks an antecedent basis.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-13, 15-18, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (5,468,153).

Regarding claims 1-2, the claimed first and second coaxial housing are shown as items 62 and 52. The housing comprise transmission elements. Item 60 is a first transmission element and the housing in item 62 constitutes the second transmission element. The device is used to convey signals between two elements of a drill pipe where the housing rotate with respect to

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each other. While the claimed electronic circuitry is not shown it would have been obvious that the device in Brown is used to communicate with other electronic circuitry since the device is used to conduct signals for control purposes. Further, while the claim recites adaptation for communication, this does not appear to result in any changes other than the conduction of a signal. Thus, the recitation of communication with elements has been interpreted as intended use limitations. Such limitations have been given very little weight.

Regarding claim 3, the system in Brown intends to use the drill pipe as a conductive medium. It is well known that drill pipes with a conductor to transmit signals may be substituted. It would have been obvious to use an internal conductor within a drill pipe to gain the advantage of better signal transmission.

Regarding claim 4, since the device in Brown is used to conduct signals to the surface via the drill pipe, it would have been obvious to use an external conductor connected to the first transmission element to provide a connection between the first conductor and the electronic equipment at the surface.

Regarding claim 5, copper wire is a conventional conductor. It would have been obvious to use items for the well-known functions.

Regarding claims 6-8, the location of electronic circuitry is considered an obvious design choice since it is not critical to the invention.

Regarding claims 9-12, it would have been obvious to locate the electronics in a recess to provide protection for the circuitry. The location of the recess would have been obvious since it based on the needs of the design.

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Regarding claim 13, it is conventional to provide a shield to protect electrical connections from the environment. Thus, the inclusion of a shield for it's well known purpose would have been obvious.

Regarding claim 15, a repeater circuit and a sensor are conventional electronic circuitry in a borehole. It would have been obvious to communicate with conventional items in a borehole.

Regarding claim 16, it would have been obvious to include an internal power source, such as a battery, to power any electronics nearby.

Regarding claims 17, 18, and 20-21, these limitations have been addressed in prior claims.

6. Claims 14 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert K. Wong whose telephone number is 571-272-3057. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 571-272-7308. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Albert K. Wong
August 23, 2006



ALBERT K. WONG
PRIMARY EXAMINER